

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this Application:

Listing of Claims:

1-7. (Canceled).

8. (Currently amended) An apparatus for production of acrylic acid or acrolein ~~having a catalytic gas phase oxidation reactor~~, comprising:

a) an evaporator for gasifying liquefied propylene and/or propane as raw material of acrylic acid or acrolein,

b) a source of water or brine ~~liquid coolant~~ in the range of 0° C to 50° C to serve as liquid coolant,

c) means for supplying said liquid coolant ~~in the range of 0 to 50° C~~ to said evaporator,

d) a source of liquefied propylene and/or propane,

e) means for introducing said liquefied propylene and/or propane into said evaporator, wherein said liquefied propylene and/or propane is gasified by said liquid coolant and said liquid coolant is chilled~~means for chilling the coolant in the~~ to a range of -10° C to 40° C ~~in the evaporator~~ by recovering latent heat of the said liquefied propylene and/or propane,

fe) a catalytic gas phase oxidation reactor,

g) means for subjecting resultant gasified propylene and/or propane to said catalytic gas phase oxidation reactor thereby preparing a gas containing acrylic acid or acrolein, and

hf) means for circulating said chilled coolant from the said evaporator to a heat exchangers~~which are attached to the apparatus, wherein said heat exchangers is being at least one member~~ selected from the group consisting of an absorbing solvent cooler and a circulation cooler attached to ~~the~~ an acrylic acid absorbing column, a condenser attached to ~~the~~ a solvent separating column, and a condenser attached to ~~the~~ an acrylic acid refining column; and

ig) means for adjusting pressure of the said evaporator for gasifying liquefied propylene and/or propane in the range of about 0.2 to about 2 MPa in gauge pressure.

9-13. (Canceled).

14. (Currently amended) An apparatus for production of acrylic acid or acrolein having a catalytic gas phase oxidation reactor, comprising:

- a) an evaporator for gasifying liquefied propylene and/or propane,
- b) a source of liquid coolant in the range of 0°C to 50°C,
- c) means for supplying said liquid coolant to said evaporator,
- d) a source of liquefied propylene and/or propane,
- e) means for supplying liquefied propylene and/or propane to said evaporator,
wherein said liquefied propylene and/or propane is gasified as a result of supplying said liquid coolant and said liquefied propylene and/or propane to said evaporator,
- f) means for chilling ~~the~~ said liquid coolant in ~~the~~ said evaporator by recovering latent heat of ~~the~~ said liquefied propylene and/or propane, wherein said means for chilling the said liquid coolant includes means for adjusting a temperature of said liquid coolant or means for adjusting a flow amount thereof,
- ge) means for subjecting resultant gasified propylene and/or propane to a catalytic gas phase oxidation reaction thereby preparing a gas containing acrylic acid or acrolein, and
- hf) means for circulating said liquid coolant from ~~the~~ said evaporator to a heat exchangers, ~~which are~~ attached to the apparatus, said heat exchangers being ~~at least one member~~ selected from the group consisting of an absorbing solvent cooler and a circulation cooler attached to ~~the~~ an acrylic acid absorbing column, a condenser attached to ~~the~~ a solvent separating column, and a condenser attached to ~~the~~ an acrylic acid refining column.